# OLDER ADULTS LIVING WITH SERIOUS MENTAL ILLNESS

*The State of the Behavioral Health Workforce*

## Introduction

Population projections show that Americans are living longer.[1] Women outlive men.[1] The population of adults that are 65 years old and over is becoming more diverse.[2] Of the 49.2 million adults over the age of 65 years[3], 1.4 to 4.8 percent suffer from serious mental illnesses (SMIs).[4,5]

The needs and growth of the older population with SMI exceeds the number of behavioral health providers that are trained in geriatric care.[5,6] Further, the workforce that works most frequently with geriatric populations (primary care physicians, assisted living and nursing home staff, emergency department staff, inpatient hospital staff, and family members) are not routinely trained in how to recognize or effectively address SMIs.[5,7,8]

The purpose of this brief is to provide a broad-based overview of workforce issues to consider when addressing the needs of older adults living with SMI, and is not intended as a comprehensive literature review.

### A Recent Timeline for Prioritizing the Workforce Needs of Older Adults with Serious Mental Illness

**2008** The Institute of Medicine (IOM) report, ***Retooling for an Aging America: Building the Health Care Workforce***, highlights the urgency for strengthening the health care workforce to meet the demands of our rapidly aging and changing population.[9]

**2009** The US Congress mandates that the IOM undertake a study to focus on the geriatric mental health and substance use services workforce needs of the nation.

**2010** The U.S. Department of Health and Human Services (HHS) contracts with the IOM to form the 16-member ***IOM Committee on the Mental Health Workforce for Geriatric Populations***.

**2012** The ***IOM Committee on the Mental Health Workforce for Geriatric Populations*** report, ***In Who's Hands***, focuses attention on the grave challenges for addressing the needs of older Americans with mental health and substance use conditions.[5]

**2016** ***The 21st Century Cures Act***, Section 9012, regulates that HHS provide technical assistance and disseminate information on evidence-based practices for the prevention and treatment of geriatric mental disorders.[10]

**2017** The Substance Abuse and Mental Health Services Administration (SAMHSA) hosts an expert panel meeting, ***Older Adults Evidence-based (EB) Mental Health Practices*** to focus on identification of EB practices and recommendations for implementing practices.

**2018** On May 16, 2018, SAMHSA convenes the expert panel meeting, ***Older Adults Living with Serious Mental Illness: Strategies to Address Behavioral Health Workforce Needs***.

SAMHSA
Substance Abuse and Mental Health Services Administration

## The Changing Demographic of the Aging Population

Over the past 10 years, the number of older adults who are over 65 years old increased by 33 percent.[2] This population is projected to almost double in 2060.[3] The 2017 U.S. Census Bureau's National Population Projections show that by 2030, all baby boomers (people born 1946-1965) will be older than age 65. This will expand the size of the older population so that one in every five residents will be over 65 years old.[11] At that point, the number of older adults will exceed the number of children.[12]

Approximately 20 percent of adults that are 65 years old and over will experience mental health issues, up to 4.8 percent will have an SMI.[5]

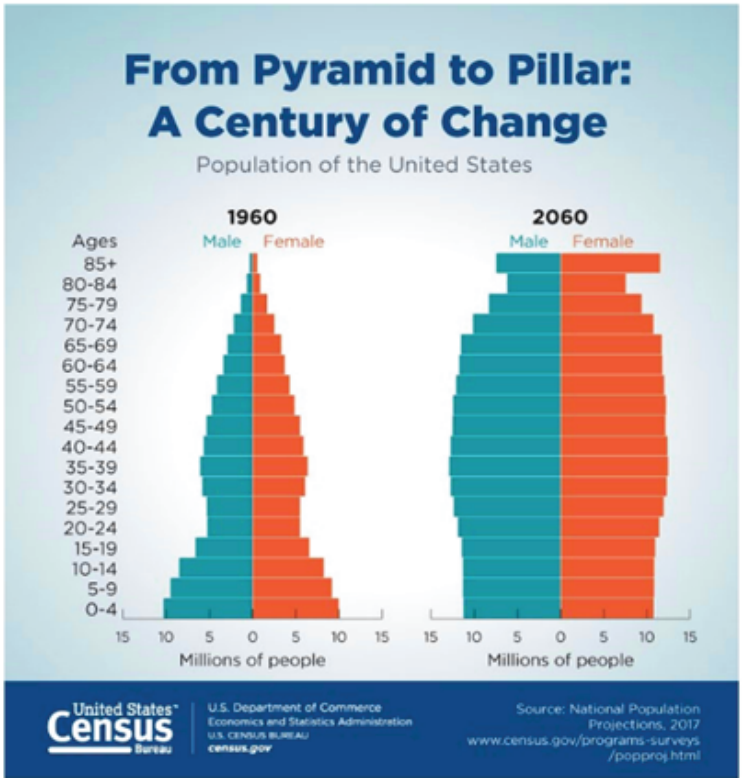
### Based on the U.S. 2017 Census Report: Older Adult Population at a Glance[2,13]

Between 2016-2040, the number of individuals 85 years old and over are projected to increase by 129%.

Persons reaching age 65 are expected to live on average an additional 19.4 years (20.6 years for females and 18 years for males).

Older women (27.5 million) outnumber older men (21.8 million).

About 28% (13.8 million) of persons over the age of 65 live alone. Of those aged 75 and over, nearly half of women (45%) live alone.




Approximately 1.5 million older adults live in institutional settings, most commonly a nursing home. The percentage increases dramatically with age, ranging from 1% for persons ages 65-74 to 3% for persons ages 75-84 and 9% for persons age 85 and over.

Approximately 9.3% of the total population of individuals over 65 live below the poverty level. Another 4.9% of older adults were classified as "near-poor" (income between the poverty level and 125% of this level).

Between 2016 and 2030, the white (not Hispanic) population age 65 and over is projected to increase by 39% compared to 89% for older racial and ethnic minority populations, including Hispanics (112%), African-Americans (not Hispanic) (73%), American Indian and Native Alaskans (not Hispanic) (72%), and Asians (not Hispanic) (81%).

Approximately 35% of older adults reports some type of disability (i.e., difficulty in hearing, vision, cognition, ambulation, self-care, or independent living).

## DEFINITIONS

The definition of **serious mental illnesses** (SMIs) includes one or more diagnoses of mental disorders combined with significant impairment in functioning. Schizophrenia, bipolar illness, and major depressive disorder are the diagnoses most commonly associated with SMI, but people with one or more other disorders may also fit the definition of SMI if those disorders result in functional impairment.[15]

**Geriatric mental health workforce** refers to the range of personnel providing services to older adults with mental health conditions.[5]

The terms "**older adult**" and "**geriatric population**" refer to individuals age 65 and older.[5]

## Co-occurring Conditions

As a normal course of aging, older adults experience changes to their physical health, mental health, and cognitions. Interactions among these age-related factors can result in "spiral" or "cascade" of decline in physical, cognitive, and psychological health.[18]

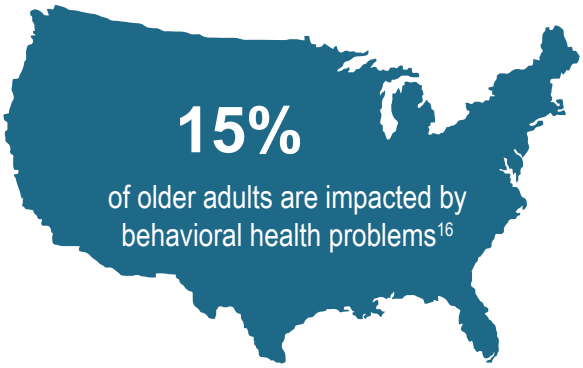
A 2006 report of the National Association of State Mental Health Program Directors indicates that people with SMI die earlier than the general population and are at higher risk for multiple adverse health outcomes.[19] There may be a number of reasons.

Older adults with an SMI have substantially higher rates of diabetes, lung disease, cardiovascular disease, and other comorbidities that are associated with early mortality, disability, and poor function.[20] They also have significant impairments in psychosocial functioning.[21] Older adults with SMI account for disproportionately high costs and service use.[20,21] Lifestyle and behaviors (e.g., tobacco and alcohol use, sedentary) may put older adults with SMI at greater risk for metabolic side effects of antipsychotic medications and lead to obesity and chronic physical health conditions.[20]

Among older adults, the rate of substance use disorders is reported as .2 to 1.9 percent.[5,22,59] Approximately 1.4 percent of older women and 2.2 percent of older men reported past-year use of illicit drugs, including marijuana, cocaine, heroin, and prescription psychotherapeutic medications, such as pain relievers and antianxiety medications that are used for nonmedical purposes.[5] The 2016 National Survey of Drug Use and Health data indicate that there are approximately 863,000 older adults with a substance use disorder involving illicit drugs or alcohol, but only 240,000 (approximately 27 percent) received treatment for their substance use problem.[59] Prevalence rates for older-adult at-risk drinking (defined as more than 3 drinks per occasion; more than 7 drinks per week) are estimated to be 16.0 percent for men and 10.9 percent for women.[22] For individuals who are 50 years old and up, misuse of opioids is projected to be 2 percent.[24]

In 2013, more than 7,000 people age 65 or older died by suicide.[25] Suicide rates are particularly high among older men, although suicide attempts are more common among older women.[25] Suicide attempts are more likely to result in death among older adults than among younger people.[25]

## Statistics Relevant to Older Adults with SMI




**4.8%**

of older adults are living with a serious mental illness[5]

**.2%** ▸ bipolar disorder[5]

**.2 - .8%** ▸ schizophrenia[5]

**3 - 4.5%** ▸ depression[5]

People aged 65 and older account for **17.9%** of suicide deaths[17]

## Challenges Faced by a Provider Workforce

There are a number of challenges to meeting the needs of older adults with SMI. For example, there is little guidance on what core knowledge is key for a workforce to address the needs of older adults with SMI, or how much training is needed.[26,29] The diversity of the population in terms of ethnicity, culture, and language make it a challenge to identify core capabilities of a workforce.[28] Thus, there are significant gaps in the behavioral health care accessible and provided to non-White populations.[31]

A big challenge for the workforce is the need to balance the principles of respecting the autonomy of the older adult with SMI and promoting their welfare, since sometimes a client's decisionmaking capacity is in question.[30]

Interestingly, some have even argued that the workforce should look at the needs of older adults as a dichotomy, with the young old (age 60-74) and the older old (age 75 and up).[27,32] This is because many more individuals in the older old group live alone, are less mobile, and have increased numbers of physical health problems that need to be addressed.[5]

Older adults are at least 40 percent less likely than younger individuals to seek or receive treatment for mental health condi-tions.[33] Those who seek services are unlikely to be seen by a provider who is trained in how to address the needs of a geriatric population.[5,34]

There are a number of clinical situations when working with older adults with SMI that may require additional knowledge and training of both the general and specialty workforce. Agitation can be common among older adults when there are co-occurring dementias and medical conditions, even in the absence of SMI.[60] Agitation also can be prevented or reduced by utilizing behavioral cues and supports such as orienting signs, proper lighting, and having familiar caregivers. Training guides for direct care staff, which provide practical behavioral interventions for people with dementia, are available.[61] Personal contact with a known individual can be helpful in preventing episodes of agitation. Such behavioral interventions require a trained, consistent, and proficient workforce.

A number of guidelines exist to help inform behavioral and therapeutic interventions. Unfortunately, however, workforce shortages contribute to challenges with the implementation of behavioral interventions and other supports.

When an individual's behavior becomes concerning in a community or residential setting, consultation with geriatric psychiatrists and other specialists can be helpful in directing care. Such specialists can make recommendations to rule out physical and neurologic conditions which may be contributing to the behaviors, such as stroke, infection, or other physical causes, and will make additional recommendations about behavioral and/or pharmacologic interventions.[62,63] In addition, specialists can be helping in ongoing management. For older adults with serious mental illnesses such as schizophrenia, ongoing treatment antipsychotics may be recommended. Consultation and/or ongoing treatment with a specialist may be helpful in individuals with multiple medical and psychiatric conditions.

If the safety of the individual or others is at stake, medications can be used to manage behaviors, in addition to behavioral health interventions.[64] A poorly trained or inadequate workforce – such as the unavailability of specialists, or low staff ratios to help provide behavioral supports - may contribute to the overreliance on medications, such as antipsychotics, to manage agitation. In some circumstances, antipsychotics may be over-utilized in community and residential settings.[65] A black box warning was implemented in 2008 by the Federal Drug Administration for antipsychotic use among older adults in nursing home settings due concerns about increased mortality.[66] Subsequent actions by the Office of the Inspector General and the Government Accountability Office highlighted the elevated use of antipsychotics in both community and nursing home settings.[67]

For older adults with serious mental illness, there is even more need for well-trained caregivers, primary providers, and specialists. Having an adequate workforce will result in better care as well as decreased reliance on medications that may have the potential to cause adverse effects.

### UNIQUE FACTORS TO CONSIDER WHEN ADDRESSING

1. **Age-related changes in the metabolism** of prescription drugs, alcohol, and nonprescription drugs, can cause or exacerbate mental, physical, or substance use conditions.[35,36]
2. **Losses that occur frequently in old age**, such as the death of a spouse, partner, close relative, or friend, can trigger emotional responses that cause or exacerbate mental health symptoms.[37,38]
3. **Acute and chronic physical health conditions are common in older adults**, and medications to treat those conditions can cause and exacerbate mental disorders.[35,39]
4. **Cognitive, functional, and sensory impairments that occur with age** can complicate the detection and diagnosis of mental disorders. They can also reduce an older person's ability to follow through with recommended treatments.[39]
5. **Older adults are less likely to seek treatment** for their mental health conditions compared to younger people. Often they need help with transportation or are living in a joint housing situation (in a family members home, nursing home, or assisted living facility).[5]
6. **Older adults are more likely to seek religious support over treatment.** Older adults are more religious than the overall population and finding ways to train and inform clergy or other religious leaders may help improve access to services.[41]
7. **The growing diversity of the older adult population** requires that providers be culturally and linguistically competent in order for interventions to be effective.[28,31]

## Workforce Issues: Impact on Access to/ Delivery of Services for Older Adults with SMI

Questions about the relationship between supply and demand are common when discussing the health care workforce. However, when it comes to addressing the needs of the older adult SMI population, it is not simple. There are no accurate data to show the number that makes up the geriatric mental health workforce.[5] The majority of psychiatric providers do not have recognized credentials in geriatrics, although several curricula are emerging, such as a certification exam for nurses educated in geriatric nursing (see Gerontology Nursing Certification Commission. Few mental health programs have mandated curricular standards related to SMI geriatric patients.[7,26,30] Where there is a curriculum, it is unclear how and to what extent the concepts are applied in the classroom or in practical training.[5,26,30] The increasing racial, ethnic, and linguistic diversity of the geriatric population also makes training in cultural competence imperative, however, it is largely not addressed.[26,30]

> ***"The workforce prepared to care for geriatric MH/SU is inadequate in sheer numbers, with the growth of the population threatening to exacerbate this."***
>
> **-Institute of Medicine, *"The Mental Health and Substance Use Workforce for Older Adults: In Whose Hands?"***

Recent efforts to augment training show that even when provided opportunities to specialize in geriatric mental health/ substance use (MH/SU), students often do not choose to pursue it.[5,7] Experts suspect that the sheer number of providers entering, working in, and remaining in the fields of primary care, geriatrics, mental health, substance use, and geriatric MH/SU is disconcertingly small.[5,9] Further, with shifting models of care and the changing roles of providers working on teams, it is not possible to estimate with great precision how many geriatric mental health specialists will be necessary to serve the geriatric population.[5,7,9,26,30]

## Barriers to Strengthening the Geriatric Mental Health Workforce

**Defining the workforce –**
The geriatric mental health workforce is made up of many types of providers. The roles of providers within a geriatric treatment team are often poorly defined and overlapping.[5,7]

**No accurate estimate of demand –**
Workforce data to make accurate predictions of workforce supply and demand are not available.[5,7,9,26,30]

**General shortage of mental health providers –**
There is a general shortage of psychiatric providers across the country, especially those capable of prescribing medication and providing evidence-based services.[5,7] The workforce prepared to care for older adults with SMI is inadequate.[26,30]

**Lack of training opportunities –**
Few opportunities for specialization in geriatric SMI exist. Professional training in geriatric psychiatry is inconsistent and not well documented because national standards and requirements in these areas are minimal and vague.[5,7-9,26,30,42] Most mental health professionals have little training in geriatrics.[5,8,9,26,30,42] Likewise, most geriatric specialists have little training in addressing SMI.[5,7-9,26,30,42]

**Lack of incentives for entering the geriatric provider workforce –**
Few financial or professional incentives are in place to encourage geriatric providers to enter and stay in this field.[5,8,42,43]

**Provider geriatric competency standards created in silos –**
Some professions have made progress on geriatric competency development though these efforts are often done independently and their dissemination and impact are not easily measured.[7,8,26,29,34,42]

**Lack of support for caregivers and community supporters –**
Often caregivers such as spouses, children, providers, and other family are interested in participating in a care team, but do not get the support to do so.[40,44] Likewise, community supporters, such as community religious leaders, can help older adults connect with services.[41]

## Increasing the Number of Providers to Treat Older Adults with SMI

There are a number of complex and interacting factors that affect the growth and competence of a workforce that is prepared to address the needs of older adults with SMI.

The caregivers and providers that have the most direct contact with older adult patients do not have training in identifying and addressing mental health conditions. These include primary care providers, emergency department and hospital staff, advance practice nurses, senior programming staff, assisted living staff, nursing home staff, and family members. Very few providers are trained in how to address older adults and SMI.[5,7,8,26,29,34,42]

**Table 1: Progress in Preparing the Geriatric Workforce***

| DISCIPLINE | PROGRESS |
|---|---|
| **Geriatricians** | Geriatricians are doctors that specialize in older adults. As of 2016, the number of geriatricians with up-to-date certifications had remained flat at 7,000 for the past 10 years. Approximately 300 geriatricians are trained each year, and many fellowship positions are not filled. |
| **Geriatric Psychiatrists** | There were less than 2,000 certified geriatric psychiatrists, and many fellowship positions remain unfilled each year. |
| **Gerontology Advanced Practice Registered Nurses (APRN, NP & CNS)** | In 2013, the certification in gerontology for NPs and CNS was phased out and combined with adult primary and acute care certifications. In turn, the number adult-gerontology certified APRN significantly increased to 12,000. |
| **Registered Nurses Certified in Gerontology** | From 2013 to 2014, the number of RNs certified in gerontology increased by 1.7%. In 2014, 7,874 RNs were certified out of 3.1 million RNs nationwide. |
| **Gerontological Social Workers** | There is no certification in gerontology for social workers. In 2009, 1,318 individuals in a Masters of Social Work program specialized in aging. |
| **Certified Geriatric Pharmacists** | Between 2010 and 2015, the number of pharmacists certified in geriatrics increased from 1,210 to 2,158 (a 78% increase). |
| **Geropsychology** | In 2010, the American Psychological Association recognized professional geropsychology as a special area of psychology and started accrediting a geropsychology postdoctoral program. In 2014, the American Board of Professional Psychology added geropsychology as a boarded specialty. |
| **Geriatric Physical Therapy** | Between 2010 and 2015, the number of physical therapists certified in geriatrics increased from 1,006 to 1,936 (a 92% increase). The number of residency programs expanded from six to 13. |
| **Gerontology-Certified Occupational Therapists** | As of 2015, there were only 18 occupational therapists certified in gerontology. |

**Table adapted from Warshaw, G. & Bragg, E. (2016). The Essential Components of Quality Geriatric Care. Journal of the American Society on Aging, 40,(1).*

## Ideas for Strengthening the Geriatric Workforce to Address SMI

**Empower Older Adults.** There is a growing emphasis on self-care. Educating older adults with SMI about their symptoms and encouraging self-care has been shown to be effective in increasing quality of life and reducing unnecessary medical costs.[44,45]

**Empower Families.** There is growing recognition of the important role that family members play as caregivers. These caregivers receive little support and training for caring for older adults with SMI.[5,46]

**Strengthen the Role of Direct Care Workers (DCWs).** Along with family members, these workers provide the vast majority of services to the elderly. However, this is a workforce that rarely is trained in recognizing and providing services to a person with SMI.[5,41,47]

**Integrate Peer Providers into the Workforce.** Peer providers are sometimes referred to as peer support specialists, certified peer specialists, and peer counselors, among other titles. The U.S. Veterans Affairs Administration regularly employs peers to work as part of a healthcare team with older adults with SMI.[5,47,48]

**Develop continuing education** for non-psychiatric health care professionals, including case managers, nurses, physician's assistants, occupational therapists, and other health care professionals.[34,42,48,49] Increase exposure of geriatric psychology and psychiatry as a routine part of healthcare training.[5]

**Promote the development of curricula** for inclusion in basic professional education for physicians, nurses, physical/occupational therapists, and pharmacists. Mentorship opportunities in these professions should also be enhanced.[34,42,48,49]

**Train for Working on Integrated Care Teams.** Providing services as part of a provider team has shown positive outcomes for addressing the needs of older adults with SMI.[5,48,50] More training should be provided to all providers on how to effectively function on a clinical team.

**Utilize multi-disciplinary team planning** as a means of strengthening and improving quality of care and promoting opportunities for training across disciplines.

## DIRECT CARE WORKERS

Direct care workers (DCWs), with minimal training, are employed to provide supportive services either in facilities or in homes. There is not a single, unified occupational title for DCWs in aging, physical disabilities, or behavioral health. Occupational titles vary within each sector and across sectors. In aging, there are generally three recognized job categories:

**# 1** **Nursing assistants are employed in nursing homes and sometimes other residential settings such as assisted living.**

**# 2** **Home health aides are employed by Medicare- and/or Medicaid-certified home health agencies.**

**# 3** **Home care aides/personal care attendants are employed by agencies or hired directly by consumers and/or their families and are employed in a range of community-based settings, including individual homes and apartments, adult daycare centers, and residential settings.[5]**

In addition, peer support specialists are increasingly being utilized to preform many of the behavioral health functions that are common for DCWs who provide services to elderly SMI populations.[48]

There is a high turnover of DCWs due to poor working conditions, low wages, lack of training, and limited opportunities for advancement. While DCWs have the most contact with older adult patients, they do not have adequate training in geriatrics or MH/SU, and virtually never receive training in both.[5]

## Programs and Services that Address the Needs of Older Adults with SMI

There are many models and services that have been shown to have a strong evidence base for addressing the needs of adults with SMI. Unfortunately, few of these have been thoroughly tested in older adult populations.[5] Additionally, few account for the high number of co-occurring conditions, and the normal cognitive and physiological changes that accompany aging.[5]

Effective practices and models for older adults with SMI need to consider how services are delivered (e.g., mobile units, transportation support, integrated health care settings); promote self-care and family involvement; and utilize an integrated care approach that addresses the physical health, mental health, and substance use needs of the older adult.

A few of the evidence-based programs that address the unique needs of older adults with SMI are listed in the Table 2. While most focus broadly on older adults with SMI, some focus only on depression, which is the most common mental health condition among older adults.

**Table 2: Some Evidence-Based Practices for Older Adults with SMI**

| NAME OF PROGRAM | SMI | LIMITED TO DEPRESSION | DESCRIPTION |
|---|---|---|---|
| Healthy IDEAS | | X | Integrates depression awareness and management into existing case management services provided to older adults.[51] |
| Helping Older People Experience Success (HOPES) | X | | Integrates psychiatric rehabilitation and health management to improve psychosocial functioning and to reduce the medical needs of older persons with SMI. [52] |
| IMPACT Care | | X | Collaborative care model that is effective for reducing depression for older adults in primary care settings. It includes shared accountability for patient outcomes and processes of care amongst all providers and stakeholders. [53] |
| Psychogeriatric Assessment and Treatment in City Housing (PATCH) | X | | Drawing from Assertive Community Treatment (ACT) Model and the Gatekeeper Model, this program trains local workers to identify at-risk individuals, refer them for psychiatric follow-up and links them with a multidisciplinary provider team. [5,54] |

## Advancing Evidence-Based Practices and Models for Older Adults with SMI

The complexity of what the older adult client experiences is not well captured in evidence-based practice models that are used with other age groups. While some evidence-based practices exist for older adults with SMI, there are few providers that are trained in how to implement them.[26,30,39] Many of the effective practice models rely on interdisciplinary teams of providers that work together to meet the diverse needs of older adults with SMI.[51-54] Unfortunately, working on an interdisciplinary team is not a standard that is taught in many health care training programs.[26,30,39] Self-help and peer support services are integrated in some of the most successful models of care, but funding these services is a challenge.[45,55,56] These and other barriers need to be considered and addressed to help move the field forward.

### Recommendations that have emerged from recent Federal meetings:

#### Use Emerging Technology to Expand Reach

Since many older adults regularly use smart phones and other electronics to communicate, this technology maybe used to provide evidence-based treatment to those who would otherwise be unable to travel (homebound) or live in rural areas with few behavioral health options.[5,57]

#### Encourage Integrated Care Models

Encourage multidisciplinary teams of providers to work together to address the mental health, substance misuse, and physical healthcare needs. Regulations, funding, and incentives should be considered to support integrated care.[26,30,39,58]

#### Consider Long-Term Sustainability of Programs

Too often, programs that are effective for addressing the needs of older adults with SMI are funded through a pilot study or a temporary funding stream, such as a grant. It's difficult to sustain these programs once the initial funding expires.[5] Serious thought should be given to funding through stable reimbursement mechanisms. Consider making all components of effective models billable, especially within Medicaid and Medicare.[58]

#### Offer a One-Stop-Shop for All Services

Older adults are less likely to seek services at a specialty care setting. Further, due to limited mobility and lack of transportation, many older adults are reluctant to visit different locations to obtain their care. Thought should be given to how to provide services in one location or to bringing services to the older adults.[5,26,30,39]

#### Report the Return on Investment

From the Federal, State and policy maker perspective, it is important to articulate the return on investment. Evaluation data, including cost data and client outcomes, can help bolster funding, community and provider buy-in, and ensure sustainability.[58]

## Select Federal Resources

Older Adult Behavioral Health Profiles by Region
https://www.acl.gov/programs/health-wellness/behavioral-health

The Federal Administration for Healthy Living
https://www.acl.gov/

The Get Connected Toolkit
https://innovations.ahrq.gov/qualitytools/get-connected-toolkit-linking-older-adults-medication-alcohol-and-mental-health

## Endnotes


1. Vespa, J., Armstrong, D.M., & Medina, L. (2018). Demographic turning points for the United States: population projections for 2020 to 2060. *Current Population Reports*, Report Number P25-1144, U.S. Census Bureau.
2. Administration on Aging, Administration for Community Living. (2018). *2017 profile of older Americans.* Washington, DC: U.S. Department of Health and Human Services.
3. U.S. Census Bureau. (2017). The nation's older population is still growing: the nation's population is becoming more diverse. Release Number: CB17-100.
4. Hudson C.G. (2012). Declines in mental illness over the adult years: an enduring finding or methodological artifact? *Aging Mental Health*, *16*(6),735-52.
5. IOM (Institute of Medicine). (2012). *The mental health and substance use workforce for older adults: in whose hands?* Washington, DC: The National Academies Press.
6. American Psychological Association. (2014). Guidelines for psychological practice with older adults. *American Psychologist, 69*(1), 34-65.
7. Lehmann S.W., Brooks W.B., Popeo D., Wilkins K.M., & Blazek M.C. (2017). Development of geriatric mental health learning objectives for medical students: A response to the institute of medicine 2012 report. *The American Journal of Geriatric Psychiatry*, *25*(10), 1041-7.
8. Liebel D.V., & Powers B.A. (2015). Home health care nurse perceptions of geriatric depression and disability care management. *The Gerontologist, 55*(3), 448-61.
9. IOM (Institute of Medicine). (2008). *Retooling for an aging America: Building the health care workforce.* Washington, DC: The National Academies Press.
10. The 21st Century Cures Act. (2015) H.R. 34, 114th Congress.
11. Vespa, J. (2018). *The graying of America: More older adults than kids by 2035*. U.S. Census Bureau. Retrieved on May 1, 2018 from https://www.census.gov/library/stories/2018/03/graying-america.html March 2018
12. U.S. Census Bureau. (2018). *Older people projected to outnumber children for first time in U.S. history*. Release Number: CB18-41.
13. U.S. Census Bureau. (2017). *The 2017 national populations projections*. Retrieved on May 1,2018 from https://www.census.gov/programs-surveys/popproj.html
14. Center for Behavioral Health Statistics and Quality (CBHSQ). (2017a). *2016 national survey on drug use and health: Detailed tables*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
15. As defined in the U.S. Federal Register, Vol. 58, No. 96; May 20, 1993.
16. SAMHSA and AOA. (2013). *Issue brief 8: Integration of behavioral health and physical health care*. Retrieved on May 1, 2018 from https://www.ncoa.org/wp-content/uploads/Issue-Brief-8-Integration.pdf
17. American Association of Suicidology. (2017). *Suicide data 2015*. Retrieved on May 1, 2018 from http://www.suicidology.org/Portals/14/docs/Resources/FactSheets/2015/2015datapgsv1.pdf?ver=2017-01-02-220151-870.

18. Bryant, C., Jackson, H., & Ames, D. (2008). The prevalence of anxiety in older adults: Methodological issues and a review of the literature. *Journal of Affective Disorders, 109*(3), 233-250.

19. The National Association of State Mental Health Directors Council (NASMHPD). (2006). *Morbidity and mortality in people with serious mental illness*. 13th in a series of technical reports.

20. Bartels, S.J. (2011). Commentary: The forgotten older adult with serious mental illness: The final challenge in achieving the promise of Olmstead? *Journal of Aging and Social Policy, 23*(3), 244-257.

21. Lin, W.C., Zhang, J., Leung, G.Y. & Clark, R.E. (2011). Chronic physical conditions in older adults with mental illness and/or substance use disorders. *Journal of the American Geriatrics Society, 59*(10), 1913-1921.

22. Kuerbis, A., Sacco, P., Blazer, D.G. and Moore, A.A. (2014). Substance abuse among older adults. *Clinics in geriatric medicine, 30*(3), 629-654.

23. Administration on Aging and Substance Abuse and Mental Health Services Administration. (2012). *Older Americans behavioral health–Issue brief 5: Prescription medication misuse and abuse among older adults*. Retrieved from https://www.acl.gov/sites/default/files/programs/2016-11/Issue%20Brief%205%20Prescription%20Med%20Misuse%20Abuse.pdf

24. Substance Abuse and Mental Health Services Administration. (2017). *CBHSQ Report- Opioid misuse increases among older adults: National Surveys on Drug Use and Health (NSDUH), 2002 to 2014.* Retrieved on May 1, 2018 from https://www.samhsa.gov/data/sites/default/files/report_3186/Spotlight-3186.html

25. Substance Abuse and Mental Health Services Administration. (2015*). Promoting emotional health and preventing suicide: A toolkit for senior centers.* HHS Publication No. SMA-15-4416. Rockville, MD: Substance Abuse and Mental Health Services Administration.

26. Hinrichsen, G.A., Emery-Tiburcio, E.E., Gooblar, J., & Molinari, V.A. (2018). Building foundational knowledge competencies in professional geropsychology: Council of Professional Geropsychology Training Programs (CoPGTP) recommendations. *Clinical Psychology: Science and Practice*.

27. Van Leeuwen, W.E., Unutzer, J., Lee, S., & Noel, P.H. (2009). Collaborative depression care for the old-old: Findings from the IMPACT trial. *The American Journal of Geriatric Psychiatry, 17*(12), 1040-9.

28. Fuentes, D., & Aranda, M.P. (2012). Depression interventions among racial and ethnic minority older adults: A systematic review across 20 years. *The American Journal of Geriatric Psychiatry, 20*(11), 915-31.

29. Lehmann, S.W., Brooks, W.B., Popeo, D., Wilkins, K.M., & Blazek, M.C. (2017). Development of geriatric mental health learning objectives for medical students: A response to the Institute of Medicine 2012 report. *The American Journal of Geriatric Psychiatry, 25*(10), 1041-7.

30. Bush, S.S., Allen, R.S., & Molinari, V.A. (2017). *Ethical practice in geropsychology*. Washington, DC: American Psychological Association.

31. Aggarwal, N.K., Pieh, M.C., Dixon, L., Guarnaccia, P., Alegr¡a, M., & Lewis-Fernández, R. (2016). Clinician descriptions of communication strategies to improve treatment engagement by racial/ethnic minorities in mental health services: A systematic review. *Patient Education and Counseling, 99*(2),198-209.

32. Zivin, K., Pirraglia, P.A., McCammon, R.J., Langa, K.M., & Vijan, S. (2013). Trends in depressive symptom burden among older adults in the United States from 1998 to 2008. *Journal of General Internal Medicine, 28*(12), 1611-9.

33. Wang, P.S., Berglund, P., & Kessler, R.C. (2000). Recent care of common mental disorders in the United States: Prevalence and conformance with evidence-based recommendations. *Journal of General Internal Medicine; 15*(5), 284-292.

34. Sorrell, J.M. (2016). Community-based older adults with mental illness: We can do better. *Journal of Psychosocial Nursing and Mental Health Services, 54*(11), 25-9.

35. Blow, F.C., & Barry, K.L. (2002). Use and misuse of alcohol among older women. *Alcohol Research and Health, 26*(4), 308-315.

36. Wu, L.T., & Blazer, D.G. (2011). Illicit and nonmedical drug use among older adults: A review. *Journal of Aging and Health, 23*(3), 481-504.

37. Alexopoulos, G.S. (2005). Depression in the elderly. *Lancet*, *365*(9475), 1961-1970.

38. Kersting, A., Brahler, E., Glaesmer, H., & Wagner, B. (2011). Prevalence of complicated grief in a representative population-based sample. *Journal of Affective Disorders, 131*(1-3), 339-343.

39. Schultz, S.K. (2011). The hazardous territory of late-life depression: A challenge to geropsychiatry. *American Journal of Geriatric Psychiatry, 19*(3), 197-200.

40. Maust D.T., Kales H.C., McCammon R.J., Blow F.C., Leggett A., & Langa, K.M. (2017). Distress associated with dementia-related psychosis and agitation in relation to healthcare utilization and costs. *The American Journal of Geriatric Psychiatry*, *25*(10), 1074-82.

41. Pickard, J.G., & Tang, F. (2009). Older adults seeking mental health counseling in a NORC. *Research on Aging, 31*(6), 638–660.

42. Batchelor-Aselage, M., DiMeglio, B., Aaron, C.S., & Dugger, B.R. (2014). Infusing geropsychiatric nursing content into curricula: challenges and solutions. *J Nurs Educ*., *53*(7), 387-94.

43. Escoto, K.H., Ozminkowski, R.J., Hawkins, K., Hommer, C., Barnowski, C., Migliori, R. et al. (2010). Integrated disease and depression management for insureds in Medicare supplement plans. *Psychiatric Annals, 40*(8), 408-14.

44. Hoeft, T.J., Hinton, L., Liu, J., & Unutzer, J. (2016). Directions for effectiveness research to improve health services for late-life depression in the United States. *The American Journal of Geriatric Psychiatry*, *24*(1), 18-30.

45. Whiteman, K.L., Lohman, M.C., Gill, L.E., Bruce, M.L., & Bartels, S.J. (2017). Adapting a psychosocial intervention for smartphone delivery to middle-aged and older adults with serious mental illness. *The American Journal of Geriatric Psychiatry*, *25*(8), 819-28.

46. Kales, H.C., Kavanagh, J., Chiang, C., Kim, H.M., Bishop, T., Valenstein, M., et al. (2016). Predictors of antidepressant nonadherence among older veterans with depression. *Psychiatric Services*, *67*(7), 728-34.

47. Bartels, S.J., Aschbrenner, K.A., Rolin, S.A., Hendrick, D.C., Naslund, J.A., & Faber, M.J. (2013). Activating older adults with serious mental illness for collaborative primary care visits. *Psychiatric Rehabilitation Journal*, *36*(4), 278-88.

48. Daniels, A.S., Bergeson, S., & Myrick, K.J. (2017). Defining peer roles and status among community health workers and peer support specialists in integrated systems of care. *Psychiatric Services, 68*(12), 1296-1298.

49. Chippendale, T. (2014). Meeting the mental health needs of older adults in all practice settings. *Physical & Occupational Therapy in Geriatrics*, *32*(1), 1-9.

50. Dreizler, J., Koppitz, A., Probst, S., & Mahrer-Imhof, R. (2014). Including nurses in care models for older people with mild to moderate depression: An integrative review. *Journal of Clinical Nursing*, *23*(7-8), 911-26.

51. Centers for Disease Control and Prevention and the National Association of Chronic Disease Directors. (2009). *The state of mental health and aging in America. Issue brief 2: Addressing depression in older adults: Selected evidence-based programs*. Atlanta, GA: National Association of Chronic Disease Directors.

52. Pratt, S., Bartels, S., Mueser, K., & Forester, B. (2008). Helping older people experience success: An integrated model of psychosocial rehabilitation and health care management for older adults with serious mental illness. *American Journal of Psychiatric Rehabilitation, 11*, 41-60.

53. Unützer, J., Katon, W., Callahan, C.M., Williams, J.W., Hunkeler, E., Harpole, L., Hoffing, M., Della Penna, R.D., Noël, P.H., Lin, E.H., et al (2002). Collaborative care management of late-life depression in the primary care setting: A randomized controlled trial. *JAMA, 288*(22), 2836-45.

54. Johns Hopkins Office of Community Services. (2011). *Community engagement inventory. Patch (psychogeriatric assessment and treatment in city housing).* Retrieved on May 1, 2018 from https://cds.johnshopkins.edu/cei/index.cfm?fuseaction=display_program&id=173

55. Cook, J.A., Copeland, M.E., Hamilton, M.M., Jonikas, J.A., Razzano, L.A., et al. (2009). Initial outcomes of a mental illness self-management program based on wellness recovery action planning. *Psychiatric Services, 60*(2), 246-249.

56. Cook, J.A., Copeland, M.E., Jonikas, J.A., Hamilton, M.M., Razzano, L.A., et al. (2012). Results of a randomized controlled trial of mental illness self-management using wellness recovery action planning. *Schizophrenia Bulletin*, *38*(4), 881-891.

57. Burke, D., Burke, A., & Huber, J. (2015). Psychogeriatric SOS (services-on-screen): An unique e-health model of psychogeriatric rural and remote outreach. *International Psychogeriatric, 27*(11), 1751-4.

58. Report to Congress of the Interdepartmental Serious Mental Illness Coordinating Committee. (2017). *The way forward: Federal action for a system that works for all people living with SMI and SED and their families and caregivers*.

59. Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2017). *2016 National Survey on Drug Use and Health: detailed tables.* Retrieved on May 1, 2018 from https://www.samhsa.gov/data/

60. Ballard CG, Waite J, Birks J. (2018). Atypical antipsychotics for aggression and psychosis in Alzheimer's disease. Cochrane Database Syst Rev. (1). Retrieved from: http://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD003476.pub2/abstract

61. Karlin, B. E., Teri, L., McGee, J. S., Sutherland, E. S., Asghar-Ali, A., Crocker, S. M., Smith, T. L., Curyto, K., Drexler, M., & Karel, M. J. (2017). STAR-VA Intervention for Managing Challenging Behaviors in VA Community Living Center Residents with Dementia: Manual for STAR-VA Behavioral Coordinators and Nurse Champions. Washington, DC: U.S. Department of Veterans Affairs. Retrieved from: https://www.nhqualitycampaign.org/files/STAR-VA_Manual_2017.pdf

62. Tilly, J and Reed, P. (2009). Dementia Care Practice Recommendations for Assisted Living Residences and Nursing Homes. Alzheimer's Association Campaign for Quality Residential Care. Retrieved from: https://www.alz.org/national/documents/brochure_DCPRphases1n2.pdf

63. Lyketsos CG, Colenda CC, Beck C, et al. (2006). Position statement of the American Association for Geriatric Psychiatry regarding principles of care for patients with dementia resulting from Alzheimer disease. *American Journal of Associated Geriatric Psychiatry*.14 (7):561–72.

64. Reus VI, Fochtmann LJ, Eyler AE, et al. (2016). The American Psychiatric Association Practice Guideline on the Use of Antipsychotics to Treat Agitation or Psychosis in Patients with Dementia. *American Journal of Psychiatry*. 173(5):543–6.

65. Gill SS, Bronskill SE, Normand S-LT, et al. (2007). Antipsychotic drug use and mortality in older adults with dementia. *Annuals of Internal Medicine*. 146(11):775–86.

66. Dorsey ER, Rabbani A, Gallagher SA, Conti RM, Alexander GC. (2010). Impact of FDA black box advisory on antipsychotic medication use. *Archives of Internal Medicine*. 170(1):96–103.

67. United States Government Accountability Office. (2015). Antipsychotic Drug Use: HHS Has Initiatives to Reduce Use among Older Adults in Nursing Homes, but Should Expand Efforts to Other Settings. 2015. Retrieved from: https://www.gao.gov/products/GAO-15-211

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